

A
variety of photoelectronic conversion apparatuses and for optical pickup applications installed in CD, DVD, and other optical disk drives.

Page 3, please replace the third full paragraph, continuing to page 4, with the following new paragraph:

A2
However, a photo diode such as the above conventional PIN photo diode is normally designed to be in a structure which is optimized for light having a certain wavelength, for example, near 780 nm when used in a CD system and near 650 nm when used in a DVD system. Generally, in a photo diode of the same structure, there is a large wavelength dependence of the light receiving sensitivity, so when trying to receive a plurality of light having different wavelengths such as light of wavelengths of 780 nm and 650 nm, by an identical photo diode or by a plurality of photo diodes of the same structure present on an identical substrate, the sensitivity ends up greatly differing at the different wavelengths. Thus, for practical use, it was necessary to make the sensitivities match in a required wavelength region.

Page 18, please replace the fourth full paragraph with the following new paragraph:

A3
Also, the distance from an end face of the depletion layer V on the substrate side to a point where the p-type impurity concentration starts to rise (corresponding to a distance between the end face of depletion layer on the substrate side and the substrate surface) can be set to be 3 μ m or less.

IN THE CLAIMS:

Please cancel Claims 2, 5, and 9, without prejudice or disclaimer.

Please enter the following amended claims:

A4 sub B1 7
1. (Amended) A semiconductor device having a photo diode comprising: